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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,649

09/27/2006

Graeme Alexander

2354/440

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26774

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11/24/2009

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EXAMINER

NGUYEN, HAIDUNG D

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,649	<b>Applicant(s)</b> ALEXANDER ET AL.	
	<b>Examiner</b> Haidung D. Nguyen	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-29 and 33-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-29 and 33-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/27/09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This action is responsive to applicant's amendment filed 7/27/09.
2. Claims 1, 3, 5-29, 33-37 are currently pending.

***Response to Amendment***

3. The previous rejection under 35 U.S.C 112, second paragraph is withdrawn in view of applicant's amendment.

The previous rejection of claims 1,3-14, 16-29, 33, 34, 36 and 37 under 35 U.S.C 103(a) over Vexler et al. is withdrawn in view of applicant's amendment.

The previous rejection of claims 15 and 35 under 35 U.S.C 103(a) over Vexler et al. in view of Casiraghi is withdrawn in view of applicant's amendment.

The previous rejection of claims 1, 3-29, 33-37 under 35 U.S.C 103(a) over Vexler et al. in view of Casiraghi is withdrawn in view of applicant's amendment.

3. The declaration under 37 CFR 1.132 filed 7/27/09 is sufficient to overcome the rejection of claims 1, 3-29, 33-37 based upon Vexler et al. and Casiraghi references applied under 35 U.S.C. 103(a) as set forth in the last Office action. However, in light of the newly amended claims, this declaration is insufficient to overcome the rejection of claims 1, 3, 5-29, 33-37 based upon newly found references.

4. Following is the new ground(s) of rejection.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Objections***

5. Claim 18 recites the composition according to claim 1 is “essentially free of intumescing agents”. However, the composition of claim 1 comprising from 8% to 40% of inorganic phosphate (i.e. ammonium phosphate) which is an intumescing agent. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

***Claim Rejections - 35 USC § 103***

**6. Claims 1, 3, 5-18, 27-29, 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romenesko et al (6,433,049) in view of von Bonin et al (4,992,481).**

Regarding claims 1, 3, 5-12, 18, 33, 34 Romenesko disclose an fire resistant composition forming ceramic under fire conditions (examples 1-12 and 1-14) that can be used as cable and wire insulation (col 1, ln 6-9), the composition comprising: (i) at least 10% by weight of silicate mineral filler (wollastonite: col 4, ln 20-21); (iii) at least 15% by weight based on the total weight of the composition of a polymer base composition comprising at least 50% by weight of an organic polymer (polyolefin: col 4, ln 11); (iv) optionally additional inorganic filler in an amount of up to 30% (col 4, ln 19).

Romenesko does not disclose the composition comprising an inorganic phosphate.

Von discloses a fire resistant composition that can be used as a cable insulation comprising from 20 to 40% of an inorganic phosphate such as ammonium phosphate (col 5, ln 51-68, col 7, ln 42-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition of Romenesko to comprise an inorganic phosphate as taught by Von because Von teaches that utilizing inorganic phosphate in a fire resistant composition that can be used as a cable insulation will provide superior adhesion properties and impermeability to smoke (col 3, ln 1-7 and ln 25-30).

Neither Romenesko nor Von discloses that the composition forms a self-supporting ceramic on exposure to an elevated temperature experienced under fire conditions that undergoes less than a 20% change in linear dimensions along its length. However, the composition of the prior art is the same as or substantially similar that set forth by applicants. It is the examiner's position that the same composition necessarily has the same properties, in the absence of factual evidence to the contrary.

Regarding claims 13-15 and 35, Romenesko discloses the composition of claim 1 or 3 comprising an inorganic filler, wherein the additional inorganic filler comprises at least one compound selected from the group consisting of magnesium hydroxide, alumina trihydrate, magnesium carbonate and calcium carbonate and is present in an amount of from 5 to 20% by weight of the total ceramifying composition (magnesium hydroxide, alumina trihydrate: col 8, ln 52-64).

Regarding claims 16, 17, 36 and 37, Romenesko discloses the composition of claim 1, wherein the organic polymer comprises at least one polymer selected from the

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group consisting of thermoplastic and crosslinked polyethylenes and copolymers and blends thereof wherein the polymer has a density in the range of from 890 to 960 g/litre (col 4, ln 39 to col 5, ln 23).

Regarding claims 27-29, neither Romenesko nor Von discloses that the composition of claim 1, wherein a rectangular test specimen of the ceramifying composition has a flexural strength of at least 0.3 MPa on exposure to an elevated temperature experienced under fire conditions or the flexural strength is at least 2 MPa on exposure to an elevated temperature experienced under fire conditions. However, the composition of the prior art is the same as or substantially similar that set forth by applicants. It is the examiner's position that the same composition necessarily has the same properties, in the absence of factual evidence to the contrary.

**7. Claims 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romenesko et al and von Bonin et al (4,992,481) as applied to claims 1, 3, 5-18, 27-29, 33-37 above, and further in view of Vexler et al (US2004/0216914).**

Regarding claims 19 and 20, Romenesko in view of Von disclose a fire resistant composition as described above that can be used as cable insulation. Neither Romenesko nor Von disclose a cable comprising at least elongated functional element.

Regarding claims 19 and 20, Vexler discloses a cable comprising at least elongated functional element (Fig 3) and at least one inner insulating layer that is a fire and smoke resistant (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the composition taught by Romenesko in view of Von to

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form the inner insulating layer taught by Vexler because the composition taught by Romenesko in view of Von can be utilized as a cable insulation and has superior adhesion properties and impermeability to smoke (Von: col 3, ln 1-7 and ln 25-30).

Regarding claim 21, Romenesko in view of Von and Vexler disclose a cable according to claim 20 wherein the single insulating layer has an inner surface abutting the functional element and a free outer surface (Vexler: Fig 3)

Regarding claim 22, Romenesko in view of Von and Vexler disclose a cable according to claim 21 wherein the single insulating layer has an outer surface free of coatings (Vexler: Fig. 2 and 3)

Regarding claims 23 and 24, Romenesko in view of Von and Vexler does not disclose that a cable according to claim 19 wherein the single insulating layer forms a self-supporting ceramic on exposure to an elevated temperature experienced under fire conditions and when formed into a rectangular test specimen undergoes less than 20% change in linear dimensions along its length on exposure to an elevated temperature experienced under fire conditions. However, the cable of the prior art is the same as or substantially similar that set forth by applicants. It is the examiner's position that the same composition necessarily has the same properties, in the absence of factual evidence to the contrary.

Regarding claim 25, Romenesko in view of Von and Vexler disclose a cable according to claim 19 wherein the inorganic phosphate is ammonium polyphosphate present in an amount in the range of from 8 to 20% by weight of the total ceramifying composition (Von: col 5, ln 51-68, col 7, ln 42-48).

Regarding claim 26, Romenesko in view of Von and Vexler disclose a cable according to claim 19 wherein the ceramifying composition further comprises 5 to 20% additional inorganic filler comprising at least one compound selected from the group consisting of magnesium hydroxide, alumina trihydrate, magnesium carbonate and calcium carbonate (Romenesko: col 8, ln 52-64).

### ***Response to Arguments***

8. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Examiner Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haidung D. Nguyen whose telephone number is (571)270-5455. The examiner can normally be reached on M-Th: 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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